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March 11, 1996

BY HAND DELIVERY

Mr. Scott Blake Harris
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Federal Communications Commission
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Washington, D.C. 20554

Ms. Michele Farquhar
Chief, Wireless Telecommunications Bureau
Federal Communications Commission
2025 M Street, N.W., Room 5002
Washington, D.C. 20554

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MAR 11 1996

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

**Re: CC Docket No. 92-297
28 GHz Spectrum Band Plans**

Dear Mr. Harris and Ms. Farquhar:

GE American Communications, Inc. ("GE Americom") submits this letter to confirm for the record its position on the Ka-band spectrum plan options currently being considered in the above-referenced proceeding. GE Americom strongly supports Option 5, which provides 1000 MHz of usable spectrum for GSO/FSS operations. Options 4 and 4 prime do not, and therefore are unacceptable.

As we have previously indicated, allocation of a minimum of 1000 MHz of usable spectrum is critical to permit GE Americom and other GSO/FSS providers to respond to demand for existing and new satellite services using Ka-band frequencies. Even this amount represents substantially less than the Ka-band spectrum that will be available for GSO/FSS use outside the United States. The availability of less than 1000 MHz of spectrum for Ka-band services in this country

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would not permit us to meet service needs of customers and would require re-design (if not complete re-evaluation) of existing Ka-band GSO/FSS service proposals. For that reason, GE Americom strongly opposes Option 4, which allocates only 925 MHz to GSO/FSS providers on a primary basis.

In contrast, Option 5 is consistent with GE Americom's Ka-band system design because it would give us 1000 MHz of spectrum. The plan requires one quarter of this spectrum to be shared with MSS feeder links. Although accommodating this sharing will impose costs on GSO/FSS operations, GE Americom is comfortable that the sharing agreement that was reached between TRW and GSO/FSS providers will not unduly constrain use of that spectrum by GSO/FSS providers.

The same cannot be said for Option 4 prime. On its face, Option 4 prime provides GSO/FSS with 1010 MHz of spectrum on a primary basis. However, in addition to sharing with MSS feeder links, GSO/FSS systems would be required under Option 4 prime to share 135 MHz of spectrum with LMDS. In that spectrum, GSO/FSS operations would be restricted to the use of a limited number of large "gateway" earth stations. Other parameters of "sharing" between GSO/FSS gateways and LMDS remain to be worked out. In GE Americom's view, it will be impossible to develop such parameters without significantly impeding the operations of either GSO/FSS operators or LMDS operators or both.

In the first place, limiting GSO/FSS operations to the use of gateways in this 135 MHz sub-band will effectively preclude GSO/FSS operations in this spectrum in a substantial part of the country. Under GE Americom's Ka-band proposal, which is fairly typical, we propose to divide 1000 MHz of spectrum into four beams of 250 MHz each in order to create a nationwide frequency re-use plan, alternating our use of each beam to prevent interference. However, under Option 4 prime, one of those four beams (representing coverage of roughly one-quarter of the country) would include the spectrum to be shared with LMDS. In areas covered by that beam, half of the beam's spectrum would be completely unusable unless that area happened to coincide with the location of a gateway antenna. This would cut the capacity of GE Americom's system in half within the areas covered by the affected beam, seriously impacting our ability to meet customer service requirements. This directly affects the financial viability of the system in two ways: the spacecraft cost is increased by giving it the capability to operate in spectrum

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that will be used only on a very limited basis, and revenues will be decreased as a result of the lower capacity of these beams.

In fact, GE Americom would be forced to seriously consider whether or not to build a spacecraft that can operate in the 135 MHz of "shared" spectrum at all. As noted above, the spectrum will be useful only where the coverage of the beam including that spectrum happens to include a GE Americom gateway site. To justify the cost of constructing a gateway, GE Americom would need a high level of certainty that a customer would be interested in committing to use of the gateway on a long-term basis. The probability that the right customer would be in the right place might not be sufficiently high to warrant the expense of incorporating the ability to use this spectrum into the spacecraft design.

Geographical restrictions on the location of the gateways -- requiring gateways to be established only in remote unpopulated areas so as not to interfere with LMDS service in more densely populated areas -- would make it even more unlikely that this spectrum would be usable by GSO/FSS operators. Such limitations would effectively preclude the use of gateways for such applications as providing data distribution services to a corporation located in an urban or suburban setting because transporting the data to a remote site prior to distribution would significantly decrease reliability and increase costs. In effect, GE Americom could use this spectrum only if it happened to have a customer that needed and was willing to commit to long-term use of a gateway and that customer happened to be in an area covered by a beam that included the "shared" LMDS spectrum and that area was sufficiently low in population that location of a gateway site there was permissible.

All this leaves aside questions regarding whether in fact GSO/FSS operators' need for gateway stations could be accommodated in unpopulated areas, taking into account not only the need to coordinate with LMDS, but also the need to coordinate among GSO/FSS operators. Furthermore, because LMDS is a new service, it is impossible to predict today how ubiquitously it will develop, and thus impossible to estimate how the need to establish permanent interference zones around GSO/FSS gateways would restrict potential LMDS expansion.

Option 4 prime, then, effectively imposes not spectrum "sharing" but a direct spectrum cut on GSO/FSS operations, significantly limiting the potential capacity of their systems. Contrary to the allegations of some prospective LMDS

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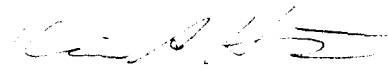
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providers, this issue has nothing to do with avoiding mutual exclusivity among Ka-band GSO/FSS applicants. It has everything to do with giving GSO/FSS operators enough spectrum to meet the needs of their customers and justify the tremendous expense of constructing, launching and operating satellites.

GE Americom is also aware that a number of LMDS parties have claimed that the spectrum segmentation plan in Option 5 would increase the costs of LMDS equipment. However, we note that these parties have introduced no evidence to quantify this impact or support their dire assertions about the probable effect on LMDS development.

In short, Option 4 prime does not provide GSO/FSS the minimum 1000 MHz of usable spectrum this service needs to expand. GE Americom urges the Commission to reject Options 4 and 4 prime and to move forward instead with Option 5. Please address any questions regarding this matter to the undersigned.

Respectfully submitted,



Peter A. Rohrbach

Karis A. Hastings

Counsel for GE American
Communications, Inc.

ccs: Chairman Reed E. Hundt
Commissioner James H. Quello
Commissioner Andrew C. Barrett
Commissioner Rachelle B. Chong
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